

Changan Chen

Contact	Gates-Dell Complex, Room 4.728 The University of Texas at Austin Texas, 78712 USA	+1 512 809 0167 changan@cs.utexas.edu changan.io GITHUB SCHOLAR
Education	The University of Texas at Austin , Austin, USA Ph.D. in Computing Science.	Sept. 2019 - Present
	Simon Fraser University , Vancouver, Canada B.Sc in Computing Science Dual Degree Program with distinction.	Sept. 2016 - Aug. 2019
	Zhejiang University , Hangzhou, China B.Eng in Computer Science Dual Degree Program with distinction.	Sept. 2014 - Aug. 2016
Research Interests	Computer vision, sound and robotics <i>Visual Acoustic Learning</i>	
Research Experience	Graduate Research Assistant - Prof. Kristen Grauman Vision Lab, The University of Texas at Austin (UT Austin)	Aug. 2019 - Present Austin, USA
	Visiting Researcher Facebook AI Research (FAIR)	May 2020 - June 2022 Austin, USA
	Research Assistant - Prof. Manolis Savva Vision and Media Lab, Simon Fraser University (SFU)	Jan. 2019 - Aug. 2019 Vancouver, Canada
	Research Intern - Prof. Alexandre Alahi Visual Intelligence for Transportation Laboratory, École Polytechnique Fédérale de Lausanne (EPFL)	May 2018 - Dec. 2018 Lausanne, Switzerland
	Research Assistant - Prof. Greg Mori Vision and Media Lab, Simon Fraser University (SFU)	May 2017 - April 2018 Vancouver, Canada
ArXiv Preprints	SoundSpaces 2.0: A Simulation Platform for Visual-Acoustic Learning <i>Under review, arXiv, 2022</i> Changan Chen* , Carl Schissler*, Sanchit Garg*, Philip Kobernik, Alexander Clegg, Paul Calamia, Dhruv Batra, Philip W Robinson, Kristen Grauman	
	Few-Shot Audio-Visual Learning of Environment Acoustics <i>Under review, arXiv, 2022</i> Sagnik Majumder, Changan Chen , Ziad Al-Halah, Kristen Grauman	
	Learning Audio-Visual Dereverberation <i>Under review, arXiv, 2022</i> Changan Chen , Wei Sun, David Harwath, Kristen Grauman	

Publications

Visual Acoustic Matching

Conference on Computer Vision and Pattern Recognition (CVPR), 2022 (Oral)

Changan Chen, Ruohan Gao, Paul Calamia, Kristen Grauman

Sound Adversarial Audio-Visual Navigation

International Conference on Learning Representations (ICLR), 2022

Yinfeng Yu, Wenbing Huang, Fuchun Sun, **Changan Chen**, Yikai Wang, Xiaohong Liu

Semantic Audio-Visual Navigation

Conference on Computer Vision and Pattern Recognition (CVPR), 2021

Changan Chen, Ziad Al-Halah, Kristen Grauman

Learning to Set Waypoints for Audio-Visual Navigation

International Conference on Learning Representations (ICLR), 2021

Changan Chen, Sagnik Majumder, Ziad Al-Halah, Ruohan Gao, Santhosh K. Ramakrishnan, Kristen Grauman

SoundSpaces: Audio-Visual Navigation in 3D Environments

European Conference on Computer Vision (ECCV) 2020 (Spotlight, top 5%)

Changan Chen*, Unnat Jain*, Carl Schissler, Sebastia Vicenc Amengual Gari, Ziad Al-Halah, Vamsi Krishna Ithapu, Philip Robinson, Kristen Grauman

VisualEchoes: Spatial Image Representation Learning through Echolocation

European Conference on Computer Vision (ECCV) 2020

Ruohan Gao, **Changan Chen**, Carl Schissler, Ziad Al-Halah, Kristen Grauman

Relational Graph Learning for Crowd Navigation

International Conference on Intelligent Robots and Systems (IROS) 2020

Changan Chen*, Sha Hu*, Greg Mori, Manolis Savva

Crowd-Robot Interaction: Crowd-aware Robot Navigation with Attention-based Deep Reinforcement Learning

International Conference on Robotics and Automation (ICRA) 2019

Changan Chen, Yuejiang Liu, Sven Kreiss, Alexandre Alahi

Constraint-aware Deep Neural Network Compression

European Conference on Computer Vision (ECCV) 2018

Changan Chen, Fred Tung, Naveen Vedula, Greg Mori

Presentations && Invited Talks	Semantic Audio-Visual Navigation	June 2021
	<i>Invited talk at The Eighth International Workshop on Egocentric Perception, Interaction and Computing, CVPR 2021</i>	
	Audio-Visual Navigation	Sept. 2020
	<i>Invited talk at Robot Learning course at UT Austin</i>	
	Constraint-aware Deep Neural Network Compression	Sept. 2018
	<i>Poster session presented at ECCV 2018, Munich, Germany</i>	
	Constraint-aware Deep Neural Network Compression	May 2018
	<i>Poster presentation at SFU-ZJU Joint Symposium, Hangzhou, China</i>	

	Navigation in Crowds: From 2D Navigation to Visual Navigation <i>Invited Talk at SwissAI Meetup, Lausanne, Switzerland</i>	Dec. 2018
	Crowd-aware Robot Navigation with Attention-based Deep Reinforcement Learning <i>Invited Talk at Swiss Machine Learning Day, Lausanne, Switzerland</i>	Nov. 2018
Professional Service	Organizing <i>AV4D</i> Workshop, ECCV 2022 Organizing SoundSpaces Challenge at the Embodied AI Workshop, CVPR 2021/2022.	
	Serving as reviewers for CVPR, ECCV, ICCV, NeurIPS, IROS, ICRA, RA-L, and SIGGRAPH.	
Honors & Awards	Professional Development Awards 2022 Adobe Research Fellowship 2022 Awarded the BS degree with Distinction President's & Dean's Honour Roll SFU Alumni Scholarship Simon Fraser University Entrance Award	July 2022 Jan. 2022 Aug. 2019 Oct. 2017 Sept. 2017 Sept. 2016
Media Coverage	Axios , Meta wants the metaverse to sound more like the real world Digital Information World , Meta Plans On Taking Digital Experiences To The Next Level With The Creation Of Audio Tools For AR And VR Engadget , Meta's latest auditory AIs promise a more immersive AR/VR experience TechMonitor , Sound of the metaverse: Meta creates AI models to improve virtual audio TechRadar , Meta wants the virtual landscape to sound like real life SiliconANGLE , Meta is building better AI-driven audio for virtual reality Social Media Today , Meta's Developing New Spatial Audio Tools for AR and VR to Enhance Virtual Experiences Facebook AI Blog , 2021 Habitat Challenge launches to advance embodied AI research Facebook AI Blog , New milestones in embodied AI VentureBeat , Facebook releases tools to help AI navigate complex environments ZDNet , Facebook is building home robots to help you find your ringing phone MIT Technology Review , Facebook is training robot assistants to hear as well as see	June 2021 June 2021 June 2021 June 2021 June 2021 June 2021 June 2021 Feb. 2021 Aug. 2020